

Building owners searching for ways to reduce lighting expenses

By Dave Hodges
DEMOCRAT BUSINESS EDITOR

As technology advances and new products emerge, owners and tenants in commercial buildings have new options available to them to gain control over lighting costs, which can account for a healthy share of electricity expense.

Take the typical office, retail store or industrial building. Chances are they are occupied more hours per day and even seven days a week, which means lights are on.

Bob Seaton, retail energy services manager for the city of Tallahassee Utilities, cites all these reasons for higher lighting costs in commercial buildings. Lighting, in fact, averages 38 percent of the power bill in a commercial building, accord-

ing to the Department of Energy.

The city's energy auditors can visit, survey a building's power usage and offer ways to curb that appetite for electricity. Seaton added that electrical supply houses and equipment distributors can take that a step further by offering specific remedies, be they changes in lighting hardware or controls.

"They tend to have very fast payback times when they undertake lighting retrofits," he said of commercial building owners.

One company, Switch Genie of Stacy, Minn., believes the answer lies in the simple control of the individual lamps in the standard four-lamp fluorescent light fixture.

The system consists of a "smart" ballast with a microprocessor inside that responds to the commands from a single light switch. The user can select either one lamp, two, three or all four to be on, said James Loughrey, company president.

The SwitchGenie works with the standard T12 fluorescent tubes, or the newer T8 lamps that require less wattage to function.

"It doesn't dim the light," Loughrey said. "It turns off one lamp at a time." The user has the ability to burn only the amount of lamps necessary for the room or the activity.

"We are going to change the way buildings use lighting," he said. "You no longer have to light every lamp in a fixture."

Loughrey credited his firm's debut in Tallahassee to the efforts of Norman Little, a manufacturer's rep and owner of Little's Church & School Furnishings. Little contacted potential users of the product and persuaded them to take a look.

Another large market segment locally is education, government and institutional buildings. Energy engineer Jim Stephens at Florida State University said FSU has instituted a range of different methods to reduce lighting expense.

Some are as simple as shutting lights off when they're not needed, either through motion sensors or timers. He noted that many building automation systems can control individual ballasts by either switching off or dimming

the lamps.

Another technique is eliminating excess lighting in areas. Many older facilities are illuminated in excess of current energy conservation guidelines, so a facility may be able to reduce energy usage by simply removing unnecessary lamps or fixtures. And don't forget about work spaces that are sufficiently lit by daylight that electrical fixtures can be turned off using a photo cell or timer.

David Fredd, lighting business development manager at electrical supplier Graybar Electric, said retrofits can have the dual benefit of reducing the wattage needed for a given light output, and providing a longer lamp life. "The technology has really come a long way,"

he added.

Fredd gave the example of a recent retrofit at the Orlando Science Center, where the facility had 1,200 track-light heads fitted with 90-watt incandescent bulbs that were being replaced every 2,000 hours. The \$300,000 project included switching to 12-watt LED lamps that have a lifespan of 50,000 hours.

The building owners anticipate a two-year return on the investment through the reduced power consumption, reduced maintenance costs for lamp replacement, and less air-conditioning expense.

Fredd said a 1-watt reduction in lighting energy corresponds to a one-third-watt decrease in cooling load in a building.